

**What the invention claimed is:**

1. A cooling exchanger comprised of a cooling base plate, two units of water pans and two units of water pumps characterized by that:

Said cooling base plate having two units of contact plates incorporated with multiple units of SbBi crystals and bridged with a conductor;

Outer edges between said two contact plates coated with insulation resin to close and separate a shortage;

Two units of said SbBi crystal containing having opposite polarities connected to a DC source and both contact plates connected to it having relative temperature difference ( $\Delta T$ );

Said two units of water pans each being a hollow container;

The front of the water pan has a water inlet and a water outlet;

Four corners of the water pan having a protrusion of a bolting hole;

The bolting hole having a locking member to pass through to hold it in position;

Both of said water pans mutually held in position on the contact plate of the cooling base plate;

A pipe each connecting the water inlets and the water outlets from said two units of water pans to form a closed pipeline;

Water controlled by a water pump circulating in said closed pipeline; and

The water from the closed pipeline flowing into said two units of water pans and completing heat exchange subject to the temperature difference ( $\Delta T$ ) of the cooling base plate to reduce the temperature of the water circulating in the water pans.